REMARKS

The Office action dated June 13, 2007, and the references cited have been fully considered. In response, please enter the amendments and consider the following remarks presented herein. Reconsideration and/or further prosecution of the application is respectfully requested.

Applicants appreciate the thoughtful examination of the application. Applicants respectfully traverse the rejections based on prior art as the art of record neither teaches nor suggests, *inter alia*, the keys as taught by the present disclosure and recited in the claims. However, rather than merely arguing this point, Applicants have amended each of the independent claims to recite that the keys define tiny intervals, which are ranges identified by two consecutive keys. Applicants refer the Office to page 16, line 14 through page 17 of the original disclosure of the present application, which discusses the discuss tiny intervals, including "[f]inding the tiny-interval containing the lookup value involves finding the two consecutive end-points between which the lookup value lies." *Id.* at page 17, Il. 10-11. Also, FIG. 2C illustrates a basic node 220 which includes multiple keys (i.e. endpoints of the tiny intervals defined for the node), and its discussion on pages 19 and 20 include a description of finding the matching tiny interval based on keys 221-222. *See especially Id.* at page 19, Il. 24-27.

Applicants respectfully submit that the prior art of record neither teaches nor suggests the use of keys and tiny intervals as recited in each of the claims and disclosed in the originally filed specification of the present application. For at least these reasons, Applicants respectfully submit that all pending claims are allowable, and request that all claim rejections based on prior art be withdrawn.

Moreover, assuming the Office action complies with MPEP \S 706 and 37 CFR 1.104(c)(2), then the Office cited the best prior art references available. As the best prior art references available neither teaches nor suggests all the claim limitations of any pending claim, then all pending claims are believed to be allowable over the best prior art available, and

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Applicants request all rejections be withdrawn, all pending claims be allowed, and the application be passed to issuance.

Applicants respectfully traverse the § 101 rejection of claims 3 and 4 as the determination of a longest matching prefix is a useful result. Applicants respectfully submit that the industry and academics have spent tens, if not hundreds, of millions of dollars in trying to figure out better ways to find a longest matching prefix, and continue to refine and define new ways of identifying a longest matching prefix. Applicants refer the Office to MPEP § 2106. Applicants respectfully submit that the identification of the longest matching prefix is (a) useful result as it is (i) specific, (ii) substantial, and (iii) credible. Claims 3 and 4 each recite a practical application that produces a useful result - the identification of a longest matching prefix. However, as this case has been pending for a long duration, Applicants have amended claim 3 as suggest by the Office to recite "storing" the result to resolve the issue from the Office's viewpoint.

In view of the above remarks and for at least the reasons presented herein, all pending claims are believed to be allowable over all prior art of record, the application is considered in good and proper form for allowance, and the Office is respectfully requested to issue a timely Notice of allowance in this case. Applicant requests any and all rejections and/or objections be withdrawn. If, in the opinion of the Office, a telephone conference would expedite the prosecution of the subject application, the Office is invited to call the undersigned attorney, as Applicants are open to discussing, considering, and resolving issues.

Applicants request a two-month extension of time is required. Should a different extension of time be deemed appropriate, Applicants hereby petition for such deemed extension of time. Applicants further authorize the charging of Deposit Account No. 501430 for any fees that may be due in connection with this paper (e.g., claim fees, extension of time fees) as required in addition to the payment made herewith using EFS-Web.

Respectfully submitted, The Law Office of Kirk D. Williams

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